

AMENDMENTS TO THE CLAIMS:

*Please amend the claims as follows:*

1. *(Currently amended)* A method of allocating bandwidth capacity for data frames transmitted over a SONET ring, comprising the steps of:

subdividing a payload portion of at least one of the SONET data frames comprising a SONET layer into two or more logical channels, each logical channel having associated therewith a predetermined bandwidth capacity;

assigning a protection mechanism to each logical channel; and

monitoring the SONET ring transmission to determine protection mechanisms associated with each logical channel

wherein each SONET data frame includes a plurality of logical channels.

2. *(Currently amended)* The method of claim 1, wherein the SONET data frames comprise a plurality of STS level one frames.

3. *(Previously presented)* The method of claim 2, wherein the protection mechanism comprises one of a layer 1 SONET protection mechanism and a layer 2 protection mechanism.

4. *(Previously presented)* The method of claim 3, wherein, if the protection mechanism assigned to a particular logical channel is not layer 1, the bandwidth capacity for the particular logical channel is allocated among three or more nodes comprising the SONET ring.
5. *(Original)* The method of claim 3, wherein the layer 1 protection mechanism comprises a bidirectional line switched ring protection mechanism.
6. *(Original)* The method of claim 3, wherein the layer 1 protection mechanism comprises a unidirectional path switched ring protection mechanism.
7. *(Original)* The method of claim 3, wherein the layer 2 protection mechanism comprises at least one of: an Ethernet protection mechanism, an asynchronous transport mode protection mechanism, or a time division multiplexing protection mechanism.

8. *(Currently amended)* A network node for use in a SONET ring, comprising:

a first circuit configured to subdivide a payload portion of at least one of SONET data frames comprising a SONET layer into two or more logical channels, each logical channel having associated therewith a predetermined bandwidth capacity;

a second circuit configured to assign a protection mechanism corresponding to a SONET protection level to each logical channel; and

a third circuit operable to monitor the SONET layer to determine protection mechanisms associated with each logical channel

wherein each SONET data frame includes a plurality of logical channels.

9. *(Currently amended)* The network node of claim 8, wherein the SONET data frames comprise a plurality of STS level one frames.

10. *(Previously presented)* The network node of claim 9, wherein the protection mechanism comprises one of a layer 1 SONET protection mechanism and a layer 2 protection mechanism.

11. *(Previously presented)* The method of claim 10, wherein, if the protection mechanism assigned to a particular logical channel is not layer 1, the bandwidth capacity for the particular logical channel is allocated among three or more nodes comprising the SONET ring.

12. *(Original)* The method of claim 10, wherein the layer 1 protection mechanism comprises a bidirectional line switched ring protection mechanism.

13. *(Original)* The method of claim 10, wherein the layer 1 protection mechanism comprises a unidirectional path switched ring protection mechanism.

14. *(Original)* The method of claim 10, wherein the layer 2 protection mechanism comprises at least one of: an Ethernet protection mechanism, an asynchronous transport mode protection mechanism, or a time division multiplexing protection mechanism.

15. *(Original)* The network node of claim 8, wherein the data frames comprise a plurality of VT-1.5 level frames.

16. (*Previously Presented*) The method of claim 2, wherein the data frames comprise a plurality of non-contiguous STS level one frames.

17. (*Previously presented*) The network node of claim 9, wherein the data frames comprise a plurality of non-contiguous STS level one frames.

18. (*Previously presented*) The method of claim 1, further comprising storing data from two or more logical channels within a single one of the SONET data frames.

19. (*Currently amended*) The method of claim 1, wherein the one or more logical channels of the SONET layer are transmitted over a common carrier fiber channel.

20. (*Previously presented*) The network node of claim 8, wherein the first circuit is further configured to store data from two or more logical channels within a single one of the SONET data frames.

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21. *(Currently amended)* The network node of claim 8, wherein the one or more logical channels of the SONET layer are transmitted over a common carrier-fiber channel.